Remarks

Claims 83, 84, and 92 through 95 are pending in this application. Claims 83 and 92 are amended herein. New claims 93 through 95 are added herein. Reconsideration is requested based on the foregoing amendment and the following remarks.

Interview:

The Applicants thank the Examiner for the many courtesies extended during the Interview of June 25, 2002. New claims 93 through 95 are based on the discussion of that interview.

Claim Rejections - 35 U.S.C. § 102:

Claim 83 was again rejected under 35 U.S.C. § 102(b) as anticipated by, or, in the alternative, under 35 U.S.C. § 103(a) as unpatentable over Pitcher et al., (Lett. Appl. Microbiol. 8, 151-156, 1989). The rejection is traversed. Reconsideration of the rejection is respectfully requested.

Claim 83 recites, in pertinent part,

"adding a sample containing said microorganism to an ultracentrifuge tube."

Pitcher neither teaches, discloses, nor suggests adding a sample to an ultracentrifuge tube, as recited in claim 83. An Effendorf tube is not an ultracentrifuge tube, contrary to the assertion in the final Office Action. Appendix A, for example, describes an Effendorf tube as limited to G forces of 25,000 or below. These are much lower than those which an ultracentrifuge tube is able to tolerate.

Pitcher is therefore unable to accomplish the method steps recited in claim 83, and claim 83 is consequently submitted to be allowable. Withdrawal of the rejection is earnestly solicited.

Claims 83 and 84 were again rejected under 35 USC 103(a) as unpatentable over Samadpour et al. (J. Clin. Microbiology, 31, 3179-3183, 1993) in view of Pitcher et al. The rejection is traversed. Neither Pitcher nor Samadpour teach, disclose, or suggest adding a sample to an ultracentrifuge tube, as recited in claim 83. An Effendorf tube is not an ultracentrifuge tube, contrary to the assertion in the final Office Action. Appendix A, for example, describes an Effendorf tube as limited to G forces of 25,000 or below. These are much lower than those which an ultracentrifuge tube is able to tolerate. Neither Pitcher nor Samadpour, either alone or in combination, are therefore able to accomplish the method steps recited in claim 83, and claim 83 is consequently submitted to be allowable. Claim 84 depends from claim 83, and adds further distinguishing elements. Claims 83 and 84 are thus submitted to be allowable. Withdrawal of the rejection is earnestly solicited.

Claim 92 was again rejected under 35 USC 103(a) as unpatentable over Pitcher et al., in view of Lanoil et al. (Appl. Environ. Microbiol. 63, 118-1123, March 1997) and Burgoune, US 5,756,126. The rejection is traversed.

Claim 92 recites, in pertinent part,

"adding a sample containing said microorganism to an ultracentrifuge tube."

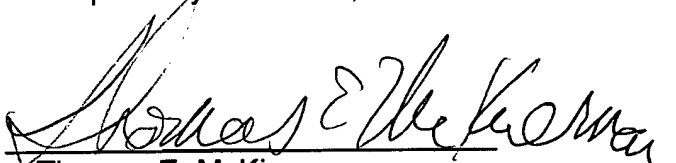
Neither Pitcher nor Lanoil nor Burgoune teach, disclose, or suggest adding a

sample to an ultracentrifuge tube, as recited in claim 92. An Effendorf tube is not an ultracentrifuge tube, contrary to the assertion in the final Office Action. Appendix A, for example, describes an Effendorf tube as limited to G forces of 25,000 or below. These are much lower than those which an ultracentrifuge tube is able to tolerate. Neither Pitcher nor Lanoil nor Burgoune, either alone or in combination, are therefore able to accomplish the method steps recited in claim 92, and claim 92 is consequently submitted to be allowable. Withdrawal of the rejection is earnestly solicited.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all claims 83, 84, and 92 through 95 are allowable over the prior art. Allowance of all claims 83, 84, and 92 through 95 and of this entire application are therefore respectfully requested.

Respectfully submitted,

By 

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Version with markings to show changes made.

83. (Four times amended) A method for determining a restriction enzyme map of a microorganism, wherein said method comprises the steps of:

(a) concentrating said microorganism which comprises the steps of:

(i) adding a sample containing said microorganism to an ultracentrifuge tube and

(ii) ultracentrifuging said sample in said ultracentrifuge tube to concentrate said microorganism, said ultracentrifuge tube comprising an upper region, a middle region and a lower region wherein an inner diameter of said upper region is larger than an inner diameter of said middle region and wherein an inner diameter of said middle region is larger than or the same as an inner diameter of said lower region;

(b) extracting genomic DNA from said concentrated microorganism to produce extracted nucleic acid; and

(c) treating said nucleic acid with one or more restriction enzymes to produce fragments of nucleic acid; and

(d) determining (1) the number of said fragments of nucleic acid, (2) the lengths of said fragments of nucleic acid, or (3) both the number of said fragments of nucleic acid and the lengths of said fragments of nucleic acid.

92. (Twice amended) A method for determining a restriction enzyme map of a microorganism, wherein said method comprises the steps of:

(a) concentrating said microorganism which comprises the steps of:

(i) adding a sample containing said microorganism to an ultracentrifuge tube and
ultracentrifuging said sample in said ultracentrifuge tube to concentrate said microorganism, said ultracentrifuge tube comprising an upper region, a middle region and a lower region wherein an inner diameter of said upper region is larger than an inner diameter of said middle region and wherein an inner diameter of said middle region is larger than or the same as an inner diameter of said lower region;

(b) extracting genomic DNA from said concentrated microorganism to produce extracted nucleic acid;

(c) staining and extracting nucleic acid;

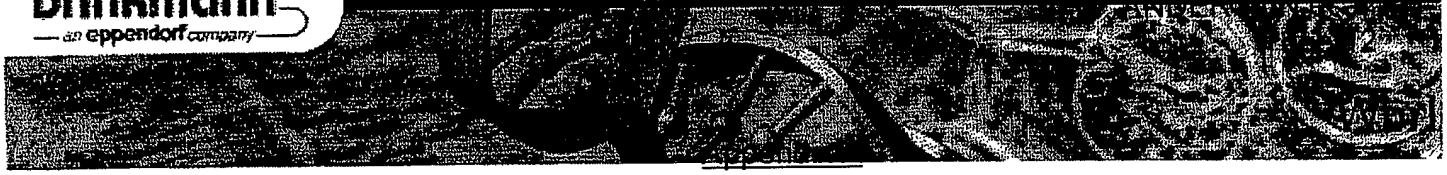
(d) immobilizing said extracted nucleic acid on a solid support to produce immobilized nucleic acid;

(e) treating said nucleic acid with one or more restriction enzymes to produce fragments of nucleic acid; and

(f) determining (1) the number of said fragments of nucleic acid, (2) the

lengths of said fragments of nucleic acid, or (3) both the number of said fragments of nucleic acid and the lengths of said fragments of nucleic acid.

Appendix A



Eppendorf® Microcentrifuge Tubes

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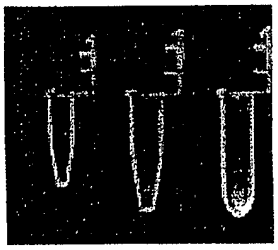
Product Bundles
FAQs

Description

Safe-Lock Tubes



The patented hinged lid on these tubes eliminates any danger of leaks. Safe-Lock Tubes ensure absolute safety when working with expensive or toxic samples, radioactive substances, or DNA. The 0.5 ml, 1.5 ml, and 2.0 ml test tubes have volume graduations and etched marking surfaces.

Hi-g Rated

Product features

- A small hook on the patented* hinged lid clips around the rim of the test tube
- Tubes can be autoclaved when open (121 °C, 20 min.)
- Can be opened easily using one hand I Etched marking surfaces
- The lid hook prevents the tube from opening accidentally (e.g. during temperature control processes)
- Rated to 25,000 x g for excellent mechanical stability during centrifugation
- Volume graduations
- Safe-Lock micro test tubes are available in Eppendorf Standard, Biopur, and PCR clean purity levels

*U.S. Patent Number 4,713,219

Flex-Tubes®

Easy-open, easy-close design provides convenient and reliable sample preparation, centrifugation, and storage.

Product features

- Economically priced
- Tubes can be autoclaved when open (121 °C, 20 min.)
- Etched marking surfaces
- Rated to 25,000 x g for excellent mechanical stability during centrifugation
- Volume graduations
- Flex-Tubes are available in Eppendorf Standard and PCR clean purity levels

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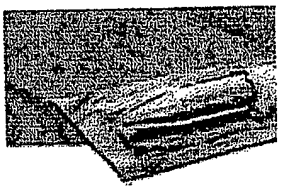
Eppendorf® Biopur



This highest biological purity category is achieved by a fully automated production process under clean room conditions and the subsequent environmentally-friendly ß sterilization.

Applications

- Medical, pharmaceutical, and food industries
- Molecular biology and cell technology

Product features

- Sterile
- Free of pyrogens, RNase, DNA, and ATP
- Monitored and certified by an external lab

PCR clean

All "PCR clean" products are clean room manufactured using automated processes. Only trained staff in special protective suits are allowed to enter this isolated manufacturing area.

Application

- PCR and other molecular biology methods

Product features

- Free of human DNA and PCR inhibitors
- Free of DNase and RNase
- Certificate included
